

METHODS FOR PATTERNING PLATINUM
AND STRUCTURES/METHODS USING SAME

Abstract of the Invention

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The present invention provides a method for forming a discontinuous conductive layer in the fabrication of integrated circuits. The method includes providing a substrate assembly having a surface including at least one metal-containing adhesion region separated by at least one surface region of the substrate assembly. A conductive metal layer is formed on the surface of the substrate assembly. The substrate assembly including the conductive metal layer thereon is then annealed. Any nonadhered conductive metal is removed from the at least one exposed surface region to form a discontinuous conductive metal layer on at least one metal-containing adhesion region, for example, by simply rising the substrate assembly in water. The conductive metal layer can be platinum or ruthenium.

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